

Replacing the F-2: Japan's complex effort to procure a new fighter jet

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Japan is moving forward with efforts to acquire a new fighter aircraft to replace the F-2: its 1990s F-16 derivative. However, undefined requirements, industrial base issues, and US-Japanese sensitivities over the F-2 development are making this procurement tricky. *Pat Host reports*

Japan is in the early stages of replacing its Mitsubishi F-2 fighter: a multi-role, single-engine aircraft that was produced for the Japan Air Self-Defense Force (JASDF). The aircraft, based on Lockheed Martin's F-16 Fighting Falcon, was jointly developed in the mid- to late 1980s and jointly produced in the early 1990s by Mitsubishi Heavy Industries (MHI), with Lockheed Martin as its principal subcontractor, in partnership with other Japanese and US companies.

Many changes have taken place in the Far East since the F-2 was first delivered in 2000. China's navy and air force have expanded and intensified their activities around Japan, as noted in the latter's 2019 Defense of Japan white paper. Beijing is also militarising the South China Sea, while expanding and intensifying its air activities in the region.



The first Japan Air Self Defense Force F-35A successfully completed its maiden flight from Lockheed Martin's facility in Fort Worth, Texas, on 24 August 2016. Although Japan is the largest buyer of F-35s outside the US, it is not an equity partner, leaving it with less influence over the platform's development. (Lockheed Martin/Liz Lutz)

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Meanwhile, North Korea maintains hundreds of ballistic missiles that have Japan within their range. Pyongyang's series of short-range ballistic missile launches into the Sea of Japan since May demonstrate its intent to further advance its missile technologies.

Additionally, Russia continues to enter Japanese airspace to spy on US behaviour in the region. Japan must therefore balance acquiring a fighter capability as a deterrent to the region's bad actors, while investing in national air defences.

A big consideration in its acquisitions is that Japan's alliance with the United States should prevent it from facing a conflict in the Pacific by itself. However, it does need an aircraft capable of defending its own territory while offering the potential for offensive strikes against North Korea.

To meet these criteria, computer models depict a large, twin-engine, multirole aircraft incorporating fifth-generation technologies, notably stealth and fusion of sensor data. This is a very different concept from the smaller F-2, according to Gregg Rubinstein, director of GAR Associates, who previously worked on US-Japanese defence and trade issues with the US Department of State and Department of Defense.

Japan plans to retire its F-2s in the late 2030s, with three replacement options being considered. One is to acquire a hybrid of the Lockheed Martin F-22 Raptor multirole fighter and the F-35 Lightning II Joint Strike Fighter (JSF). Japan is already buying 147 F-35s, 42 of which could be the F-35B short take-off and vertical landing (STOVL) model, making Japan the second-largest JSF operator outside the US.

The second option is building the Tempest conceptual fighter that the United Kingdom is planning to develop. The last option is investing in unmanned aerial vehicles (UAVs) to enable a swarming strategy similar to what the US Air Force (USAF) is planning in future, where a pilot can manage UAVs from an aircraft such as the F-35.

Requirements

One challenge Japan is facing with its new fighter acquisition is that it is still defining requirements. One consideration is China, which has been active in developing advanced fighter aircraft and increasing its force structure substantially over the last few years.

Zack Cooper, research fellow at the American Enterprise Institute, told *Jane's* that the arrangement between the US and Japan for future conflicts, where the US is considered the sword in the alliance

and Japan the shield, plays a part. If Japan does not need its new fighter to be the most advanced of its kind, it will have to determine the right mix of necessary capabilities. Cooper asked how stealthy Japan's new fighter needs to be, as well as how capable it must be in conducting strikes against ground or naval targets.

James Schoff, who is a senior fellow on the Asia programme at the Carnegie Endowment for International Peace, told *Jane's* that Japan is debating whether it simply needs an air superiority fighter or an aircraft that can attack an adversary. Tokyo, he said, is debating whether it might just need a "workhorse" aircraft that can counter potentially hostile aircraft that recurrently enter Japanese airspace. In terms of its actual operations in recent years, the JASDF has largely been performing scrambling tasks to intercept mostly Chinese and Russian aircraft to warn them away. Schoff said that the JASDF intercepts Chinese or Russian aircraft on average once a day, which inflicts a lot of wear and tear on its F-2s. This could signify the future need for a relatively cheap fighter without many extras.

Cooper added that the hard question facing Japan is what the right mix of advanced and simpler aircraft looks like. It might be more cost effective for the country to have some advanced aircraft such as the F-35 and some that are highly capable but can work in a teaming arrangement: where they use sensors from other aircraft alongside less advanced aircraft working in more permissive environments.

[Continued in full version...]

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